



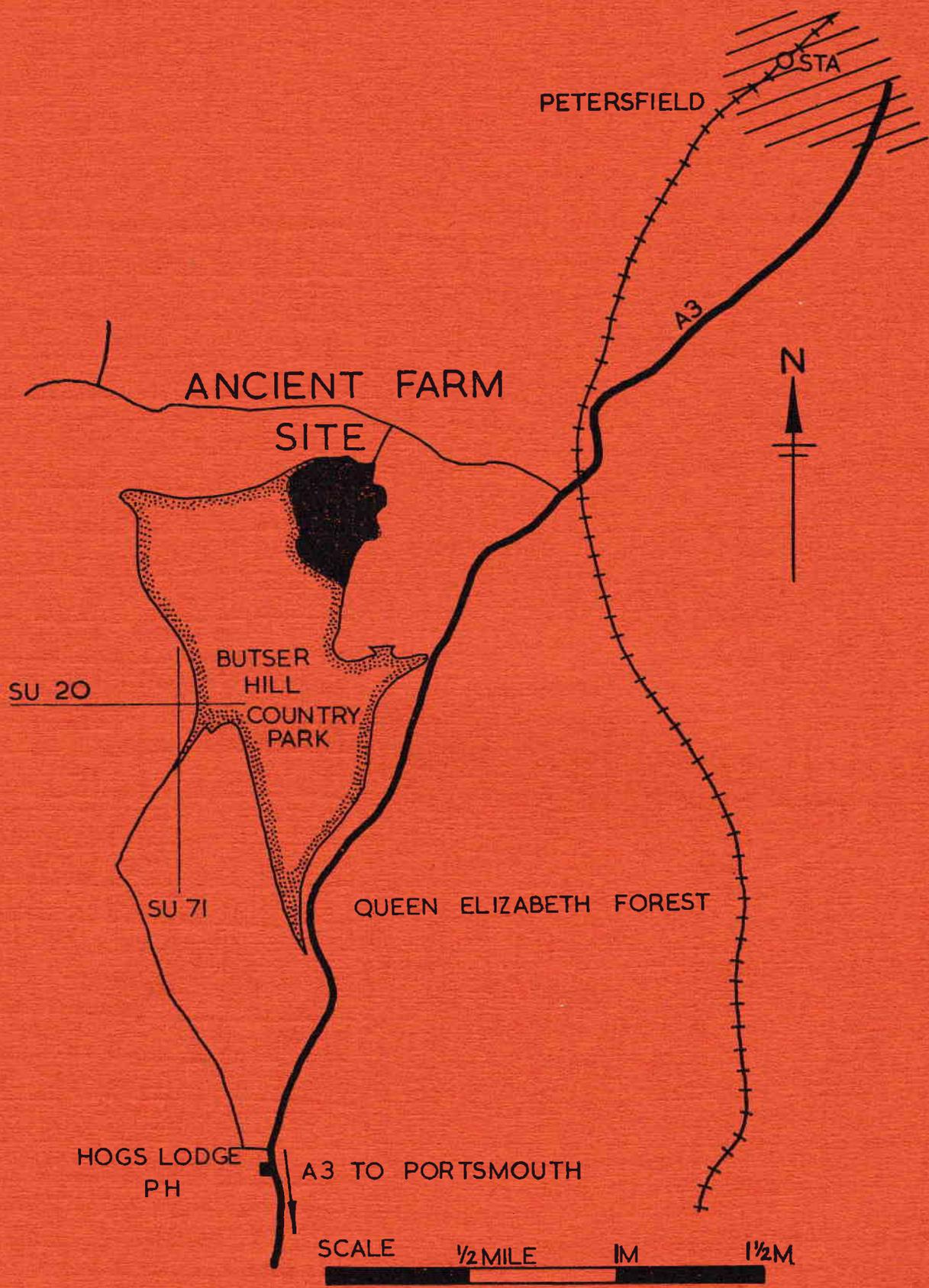
PROJECT

FOR

RESEARCH

AND

EDUCATION



Based upon the OS map with the sanction of HMSO

**PREHISTORIC FARM AT BUTSER HILL
PROJECT FOR RESEARCH AND EDUCATION**

Proposal to establish a working " ancient farm "

on

**Little Butser, near Petersfield, Hampshire, by the
Research Committee on Ancient Agriculture of the British Association
for the Advancement of Science and the Council for British Archaeology**

January 1970

The Cover Design.

The motif symbolising agricultural prosperity is taken from the late Iron Age gold coin of EPATICCUS, who added parts of Hampshire to his kingdom shortly before the Roman Conquest of 43 A.D.

SUMMARY

The proposal to set up a permanent working ancient farm on Little Butser is being made by the Research Committee on Ancient Agriculture of the British Association for the Advancement of Science and the Council for British Archaeology. The paper that follows sets out in some detail the reasons for the project and how its development is envisaged. In short, it involves the establishment of an institute unique in this country which should bring great benefit in archaeological interpretation, in the presentation of prehistory and history to students of all ages, in the use of educational methods involving practical work and in interesting the public who visit Butser. The need for it in terms of research has been demonstrated abundantly by hundreds of inadequate single experiments. Investigation of farming practices requires appropriate and very varied skills as well as years of scientific recording. The final justification for the permanence of the ancient farm will be that it lies at the core of a research institution whose teaching virtues stretch beyond pure archaeology into natural history, ecology and the inculcation of simple accurate observation, vital to research in all fields.

INTRODUCTION

In the study of a country's history no single subject is more important or more interesting and informative than that which is concerned with the ways in which people won and maintained their food supply. For a matter of six thousand years men have farmed the land of Britain: in the final analysis our prosperity was for centuries based upon a sound agriculture. In this fact alone lies the justification for the first sentence of this statement, sweeping as it may seem; but other considerations have their importance, even for a contemporary situation: the need, for instance, to understand how our present environment was created if we are to deal wisely by it in the present and in the future.

Decades of archaeological fieldwork have produced a considerable body of knowledge relating to early agriculture. Ancient cultivation systems have been studied by air and ground-survey and by excavation; excavation has also provided information on the houses and other components of early settlements, as well as some of the equipment used by their occupants both in working the land and in processing its products.

Archaeologists have come to more or less theoretical conclusions about the purpose and use of the various objects and structures that they find in their excavations. They have ideas also on the meaning of the features that they recognise as being concerned with cultivations or other farming activity. It has become increasingly clear, however, that further progress towards an understanding must largely depend on experiments aimed at putting these theories and ideas to the test and for producing a multitude of new observations to bring freshness and wisdom to archaeological interpretation. Such experiments must take place in controlled conditions, with the application of scientific techniques of assessment to practices carried out in conditions reproducing as closely as possible those that prevailed at the appropriate time in the past. Preliminary experiments in the pit-storage of grain have already demonstrated the value of quantitative analysis, correcting conclusions arrived at on a theoretical basis. Another obvious problem is the evaluation of primitive farming methods in terms of yield from given areas of land.

Accumulated experience has taught that in all projects of this kind the world of nature and the activities of man are so closely interlocked that the co-operation of many disciplines is called for if the best results are to be achieved. The returns will not only be archaeological: the corn-storage experiments, for instance, have been valuable, limited as they were, for population studies. In the way that the behaviour of many kinds of organism will come under scrutiny in the course of the work biological and ecological studies will also benefit.

The policy of seeing the subject whole by the closest collaboration of scientists of all kinds is partly reflected in the composition of the Research Committee on Ancient Agriculture which is given at Appendix "A." The second part of this statement sets out in detail the programme which the Committee hopes to develop in both its practical and its academic and research aspects, short and long-term. It outlines the proposals for the establishment of the working farm which will be the central element in that programme, with the considerations that make the site on Little Butser Hill in the County of Hampshire an excellent one for the purpose, geologically, topographically and archaeologically. Finally, attention is drawn to the significance of the project for something more than the specialised research results which will be of particular interest to students and experts. As its work develops, the centre will perform an educational function which will be the more rewarding in that the parties of school-children and adults who will visit it will observe the processes by which knowledge is acquired as well as benefitting from that knowledge. In a more general way, set in the Country Park, and supported by the appropriate displays and exhibits, the centre will be of interest to a great many visitors.

EXPLANATION

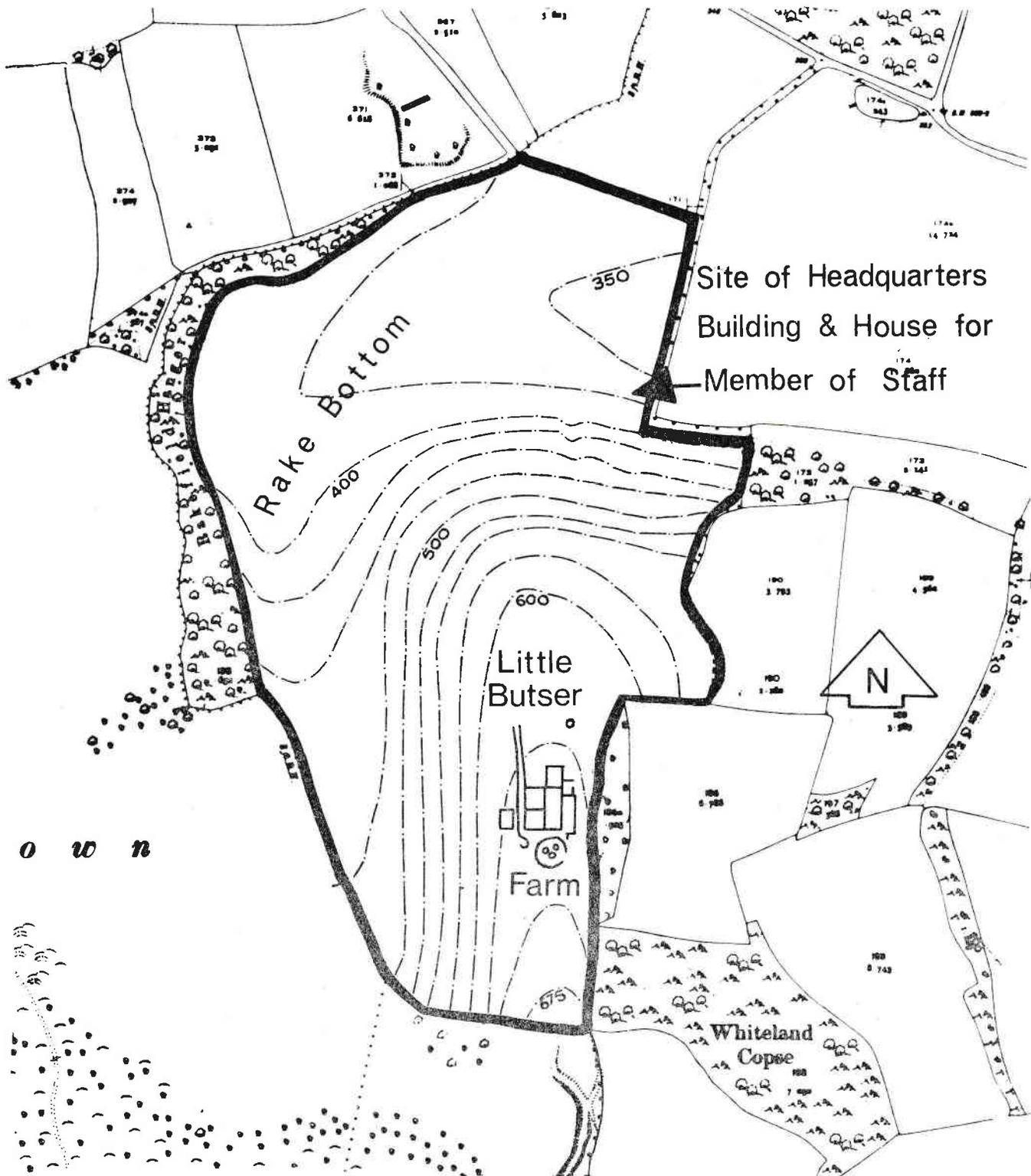
The following is intended to explain the proposal to establish a working "ancient farm" on Little Butser. The scheme is put forward by the Research Committee on Ancient Agriculture, a body sponsored both by the British Association for the Advancement of Science and by the Council for British Archaeology. The present composition of the Committee is given in a note, "A," at the end. The following account is roughly divided into two sections. The first part, "Why," shows why the establishment of an "ancient farm," as the nucleus of a permanent research institute on ancient agriculture, is thought to be necessary. There is a note explaining why Little Butser is so suitable. The second part, "How," indicates what is involved in terms of staff, structures and operations.

WHY

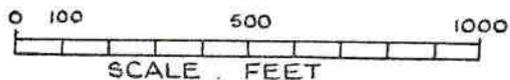
The need for experiment as such is abundantly expressed in innumerable experiments carried out, usually after excavation, by responsible archaeologists. The Ancient Agriculture Research Committee has itself carried out experiments in experiment based on a large number of excavation results, documentation and analogy. The results were surprisingly fruitful, but at the same time, they showed the inadequacies of limited investigation. Experiment in the way of life on an ancient farm and its methods of operation depend on skills and time that can only be available in a permanent institution. The conjunction of two further facts will show why such a permanent institution should be set up: firstly, that in prehistoric Britain the vast majority of communities were concerned with farming; secondly, that all excavation is, incidentally, destructive (and should, therefore, be conducted against a background of maximum information). The purpose of establishing an "ancient farm" would be to provide adequately skilled personnel and trained animals facing similar problems to those presented about 300 B.C. This date is selected because just enough is known for us to attempt reconstructions of methods which were to be basic from that time forward through the Roman period. Scientific observation and record would enable marks made in known ways to be compared with those found in excavation. The processes of farming would be illuminated and working hypotheses would become visible. Replication, that is, repetition of identical experiments, would be automatically sufficient. The undoubtedly very wide range of variables would be deliberately allowed for. The possible crop yields, the effect of animals used in different ways, the rates of lynchet formation, the wear of tracks, the methods and adequacies of water collection and storage, the efficacy of corn storage underground and the other numerous use for the pits which provide the most fruitful source of evidence on a huge number of prehistoric sites, all these and a multitude of other results would add up to a new insight. This would probably multiply the worth (and so returns for money) of a very large number of excavations and enable this insight to be passed on to the public and, in particular, to its student members. For those taking part in the workings of the farm the advantages in observation are calculated to be of the very highest educational value.

An "historical-archaeological experimental centre" has been established in Denmark for some four years. While confirming the Committee's belief in the need for, and value of, experiments, this institution in no way lessens the need for the British institution here proposed, which would be significantly different in type. There is already a close relationship established with the Danish centre, a note on which is appended at "B."

There is enthusiastic support from the many professional and amateur archaeologists consulted and these proposals have been welcomed by the Countryside Committee of the Hampshire County Council who are prepared to make the site available at a nominal rent. The farm would be operated as a working unit but its operation would be observed and recorded scientifically. Particular experiments would be built in as necessary. Eventually, it would be hoped to add experiment in the practice of other periods.



Approx. Contours at 25ft intervals
 Based on the Ordnance Survey Map with
 the Sanction of H.M. Stationery Office.



Little Butser is such a good site because it is on Chalk with Greensand fringes and has all the slopes, aspects and combination of open grass and woodland that we could hope for in a relatively restricted compass. Former "Celtic" fields lie all around and an associated settlement, not yet identified, certainly lies near. The first farm "settlement" would be on the spur itself. The next, probably "Roman," would very suitably be at the mouth of Rake Bottom, where, also, there is a good site for the permanent headquarter buildings of modern type. These points are elaborated in the next section.

HOW

The farm will be at the same time a research institute and a public attraction where archaeologists' deductions about the past can be seen working (and therefore tested) in reconstructed activity. It will demonstrate what the greater part of prehistoric archaeology is about—the rural way of life.

The area being considered, on and around Little Butser, covers about 57 acres between 350 ft. and 650 ft. O.D. on and around a spur projecting N. from the Butser massif. Eleven acres are on the ridge top, 23 acres on its sides, mostly coppice, and about 23 acres in valley bottom to W. and N. According to geological drift 6" maps the whole area is Chalk. Clay-with-flints caps the hill-top to S. Greensand outcrops just N. of the area. There is a possibility that public access should be from below, N.E., and modern headquarters "buildings" could well be sited in this area (Grid Ref. 719212). It seems reasonable that one of the farm staff should also live hereabouts.

The site is a good one for Iron Age settlement of about 300 B.C. and a farm could be realistically established on a saddle of the spur. There is no natural water supply but there is a piped supply on the spur top. Before any disturbance of the ground takes place it is desirable to carry out (i) a botanical and ecological survey; (ii) a soil survey; (iii) excavation of the "tumuli," omitted on plan, shown by O.S. on the N. fall of the spur. To assist all three and to provide an accurate statement of present shape, special air photographs would be taken in winter and provide the material for a plan with close contours of about 2 ft.

Archaeologists would inevitably submit and suggest experiments—or just questions. These would almost certainly involve periods later **and** earlier than the Iron Age as well as subjects concerning a farmer's activities not perhaps directly agricultural.

Three stages might be considered in the development of the project:—

- A. Appointment and training of staff and draught animals. Equipping. Full record kept but not used as basis for archaeological argument.
- B. Operation of farm as realistic enterprise providing reasonably valid results for Middle Iron Age around 300 B.C.
- C. Extension of operations to embrace at least Stone Age, Bronze Age, and Romano-British period.

An idea of **initial costs** is given at Appendix "C."

Phase A.

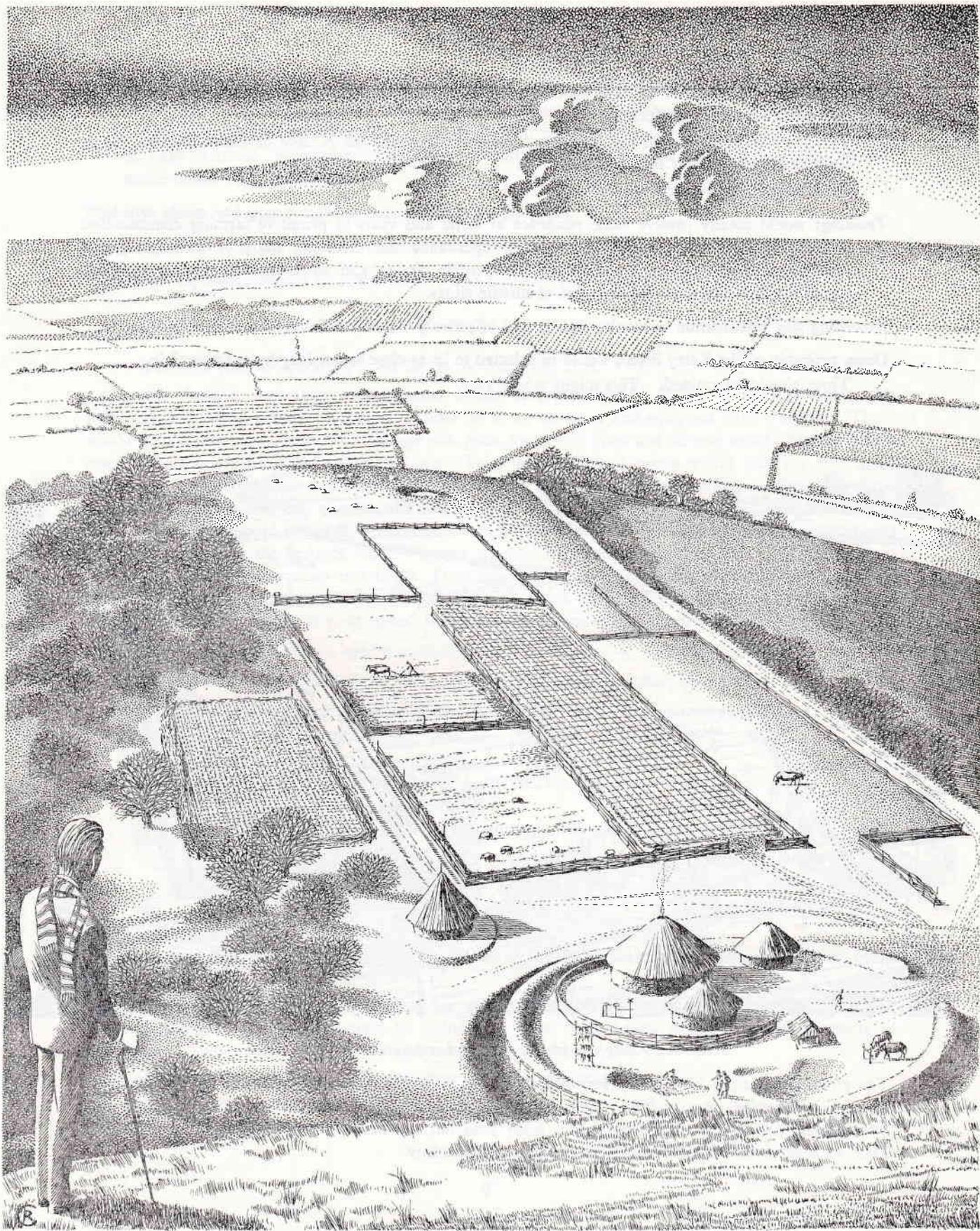
Staff: The **man-in-charge** should be an **archaeologist** with farming knowledge and interests and, preferably, a **scientific** training.

The **second-in-command** should be the chief practical operator, preferably a **technician** with **farming** and **archaeological** experience and interests.

The **educational officer**, who might be appointed for Phase B, would explain and discuss and arrange for student help and student courses.

A **clerical assistant** would be essential from the first.

It is anticipated that students from school and University would be constantly helping—and so learning.



Impression of the Farm in Phase B from south

Headquarters: It is essential to have an office, archive room, lecture, study, cooking, and store rooms with some laboratory equipment.

These would be housed in one building of modern design at the N. foot of Little Butser. House for member of resident staff adjacent.

Detailed weather records would be kept.

Training: would ideally involve some residence at Lejre and visits to primitive farming communities; wide analysis of documentary evidence for operations and methods; study of techniques, e.g.: basket and wattle making; iron forging; carpentry, plough and wheel-making; leather working; use of strike-a-lights; potmaking; use of missile slings.

Recording and presentation of results rapidly and effectively would be discussed and finalised.

Oxen, probably of the Kerry breed, would be selected to be as close to *bos longifrons* as possible.

Three should be trained. This might take a year.



Recorded Ploughing in Phase B—an impression from the north

The plough is an exact copy of a prehistoric one found preserved intact. The plough action and furrow spacing is recorded on cine-film. The figure at the head of the team is recording the pull on a dynamometer as well as acting as lead. Each field has a "history sheet" recording its total use. Pigs are penned, top right, breaking the soil in a different way.

Building of the settlement enclosure and houses would be done as a recorded operation. The houses would have the exact posthole arrangement of excavated examples. The enclosure would be hedged according to botanical advice. Dykes would be built at the neck of the spur and the head of Rake Bottom. Measuring rods would be built into banks and ditches and each field given a notice board with "history sheet."

Primitive sheep and pigs would be introduced and a pony kept.

Coppicing is essential for stakes of all kinds, and wattle, and would be started immediately.

Unrealistic vegetation should be removed, so far as possible, and suitable weeds, etc., imported.

Phase B.

The first year of operation could be on the following lines.

The farm as a working establishment would have a hedged enclosure around 4/5 acres with three thatched round houses, the largest at least 30 ft. in diameter and equipped with a hearth. There would be one granary on stilts, four storage pits, posts for drying grass and an area away from the houses reserved for working and burning operations. Fencing and ditched tracks would lead out past fields marked by brushwood fences or only banks. Measuring rods would be in position. Cultivation of the fields would be by **bow ard**; a **crook ard** would be tried for sowing. Neither would have iron tips at first. Excavation would establish what marks were made by the ploughs both on a specially prepared control area and on the bedrock chalk. Stones would be gathered from the fields. Marked pottery would go out with manure on two fields. The movement and breaking-up of this pottery would be determined by subsequent excavation. Four "Celtic" fields totalling about two acres would be sown with **emmer** and **spelt** and the yield stored, being drawn upon to simulate consumption during the winter.

Corn would be ground on saddle-querns.

Wool would be spun and woven using simple spindles and weighted-frame looms.

An illustrated Iron Age calendar of seasonal labours might be produced at this stage.

Standard "experiments," for annual repetition thereafter, would include:—

Permutation of pit and granary storage of crops.

Effectiveness and techniques of ploughs, sickles, etc.

Crop yields with different treatments.

Burning operations—corn parching and pottery-making.

Lynchets formation.

Recording of marks made on ground and tools.

Phase C might include:—

A Romano-British rectangular cottage built at the foot of the slope with corn drying ovens adjacent.

Construction and use of late Iron Age and Roman scythes, rotary querns, reaping machines, specialist ploughs. Crops augmented to include rye, oats, horse-beans, woad, flax, etc. Burning of any house. Iron-ore roasting in pit and subsequent smelting.

Requests for experiment will also come from excavators, etc.

" A " ANCIENT AGRICULTURE RESEARCH COMMITTEE, 1969.

Chairman: Professor W. F. Grimes, Director, Institute of Archaeology, London University.

C. W. Phillips, lately Archaeology Officer to the Ordnance Survey.

Professor G. W. Dimbleby, Professor of Human Environment, Institute of Archaeology, London University.

Professor S. Piggott, Abercromby Professor of Prehistoric Archaeology, University of Edinburgh.

Professor C. F. C. Hawkes, Professor of the Archaeology of N.W. Europe, Oxford University.

P. J. Fowler, Staff Tutor in Prehistory and Archaeology, Bristol University.

J. Collis, Research Worker in Prehistoric Archaeology, University of Cambridge.

A. Aberg, Staff Tutor in Archaeology, Leeds University.

G. Whittington, Lecturer in Geography, University of St. Andrews.

Dr. P. D. Wood, Reader in Geography, University of Queensland.

H. C. Bowen, Staff of Royal Commission on Historical Monuments (England).

Members Co-opted for Guiding Sub-Committee. Ancient Farm Project.

Dr. J. Coles, Faculty of Archaeology and Anthropology, Cambridge University.

Professor B. W. Cunliffe, Professor of Archaeology, Southampton University.

D. E. Johnston, Staff Tutor in Archaeology, Southampton University.

Dr. P. A. Jewell, Department of Veterinary Science, London University.

N. de l. W. Thomas, Keeper of Archaeology, Birmingham City Museum.

Dr. R. J. Small, Department of Geography, Southampton University.

Mrs. Jane Renfrew, Lecturer, Department of History, Sheffield University.

C. C. Bonsey, County Land Agent, Hampshire.

W. G. Budden, Manor Farm, Chalton, Hampshire.

" B " HISTORICAL-ARCHAEOLOGICAL RESEARCH CENTRE, LEJRE, DENMARK.

This centre was established at Lejre, near Roskilde, some 20 miles W. of Copenhagen, in 1964. The founder and present Research Director, Hans-Ole Hansen, is a former student of Professor Axel Steensburg, who is perhaps the greatest living expert on primitive farming practices, and has given constant and enthusiastic support to the venture. Financial support for the first 3½ years depended chiefly on the Carlsberg Foundation. The centre has now been taken over by the Ministry of Education.

The Centre differs from the English proposal in the following ways:—

- (i) It is concerned with *ad hoc* experiment and not the running of a permanent farm.
- (ii) Although a settlement of the later Iron Age has been reconstructed this is of Danish type, very different from the British in a number of essentials, notably in house type and in lack of pits.
- (iii) It is operating in conditions climatic and geological quite different from the British.
- (iv) Its activities are already wider than is contemplated even for the ultimate development at Butser, e.g., in the operation of a massive weaving establishment and the reconstruction of prehistoric jewelry (activities sometimes criticised as not sufficiently linked to research or education).

There can be no doubts, however, of the immense value of the work going on at Lejre and great care would be taken to integrate our programme with the Danes'. Hans-Ole Hansen has already offered to train, at minimal cost, British staff in certain techniques.

"C" APPROXIMATE COSTS.

INITIAL OUTLAY:

	£
Headquarters, to include one staff house and laboratory, teaching and storage rooms	30,000
Approach road, car park, fencing, etc.	5,000
Total ...	<u>£35,000</u>

PRELIMINARY SURVEY:

(most covered by running costs in first two years, with invaluable help already promised from University centres for photogrammetry)	100
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ANNUAL COSTS:

Salaries—	
Director	3,000
Second in charge	2,000
Education Officer	2,000
Clerical Officer	1,000
Add for superannuation, insurance and S.E.T.—12½%	1,000
Running—	
Replacements, miscellaneous repairs, casual labour	500
Research equipment	200
Computer time	100
Vehicle	300
	<u>£10,100</u>